Source Four HID PAR™ CE User Guide

CE

DECLARATION OF CONFORMITY

We, Electronic Theatre Controls, Europe Limited
Unit 5, Victoria Industrial Estate, London W3 6UU United Kingdom declare under sole responsibility that the product:

Product name:	Source Four HID luminaires
Product type/model:	405HID, 410HID, 419HID, 426HID, 436HID, 450HID, 41530 HID, 42550 HID, 426HIDJ, 436HIDJ, 450HIDJ, 2550HIDJ, PAR-EAHID, PARNel HID
Lot:	n/a
Batch / Serial number:	n/a
Item numbers:	one of each type

to which this declaration relates is in conformity with the following Standards:

EN60598-1:2000	Luminaires, General requirements and tests
EN60598-2-17:1990	Luminaires, Particular requirements, Specification for luminares for stage lighting, television, film and photographic studios (outside and indoor) - equiv. BS 4533-102.17:1990
BS EN 60922:1997	Auxileries for lamps. Ballasts for discharge lamps (excluding tubular fluorescent lamps). General and safety requirements.

Following the provisions of EU LV Directive(s) 73/23/EEC

EN55015:1996	Limits and methods of measurement of radio disturbance characteristics of electrical ligthing and similar equipment.
EN61000-3-2:2001	Electromagnetic compatibility (EMC) Limits. Limits for harmonic current emissions (equipmetn input current up to and including 16 A per phase) - Class C
EN61000-3-2:1995	Electromagnetic compatibility (EMC) Limits. Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current <= 16 A

London, United Kingdom	Adam Bennette
(Place of issue)	(Name of authorised person)
13th December 2002	Adam Bennette
(date of issue)	(signature of authorized person)

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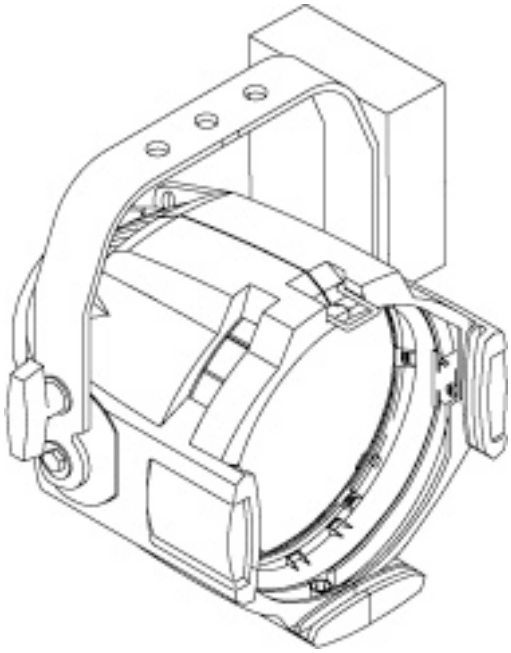


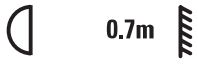
Source Four HID PAR CE guidelines

Please note the following precautions prior to use:

The Source Four HID PAR CE is intended for professional use only. **Read the entire User Guide before using equipment.**

Please note the following safety precautions:

- The Source Four HID PAR CE is **NOT** dimmable. Dimming or regulated voltage will damage the ballast and void the warranty.
- Do not mount the Source Four HID PAR CE on or near a flammable surface.
- Use the Source Four HID PAR CE in dry locations only, where humidity does not exceed 90 percent.
- The fixture is for indoor use only and is not intended for outdoor use.
- For temporary installations, mount and support the Source Four HID PAR CE only by the primary suspension yoke holes. Suspend the fixture from a hook clamp or a stand mount, using a securely tightened steel bolt (up to Ø 12 mm), flat washer and locking washer.
- In addition to primary suspension, attach a safety cable (Model 400SC) or chain to the secondary suspension point on the Source Four HID PAR CE.
- If the external cable is damaged, it shall be replaced by ETC or our service agents.
- Always hang the Source Four HID PAR CE with the colour frame held securely behind the PAR retaining channel.
- Always replace the lamp if it becomes damaged or thermally deformed.
- Lighted objects at this distance or greater will not exceed 90ºC temperature from projected light.
- Disconnect the unit from power before all cleaning and maintenance.
- The Source Four HID PAR CE is suitable for indoor use with a maximum ambient temperature: T_a=45°C
- Maximum exterior surface temperature: T_{max}=200ºC
- A multilingual label sheet is included with this manual. Affix the label of the appropriate language over the existing warning label on the extension yoke. Do not cover ETC trademark or CE mark.
- The Source Four HID PAR CE contains a CE safety screen that covers the lens in the event of accidental discharge. Do not remove the safety screen.
- Keep the luminaire at least 0.7 meters away from anything it is shining on.



Wiring and power information

A plug of at least 2.5 amp (220/240V) rating should be attached to the fixture's mains lead. The wires in the mains lead are 1.5mm^2 each and coloured in accordance with the following code:

Green and Yellow:	Earth
Blue:	Neutral
Brown:	Live

WARNING: *The CE Source Four HID PAR CE must be earthed.*

Current rating:	240V/2.5 amp maximum
Operating frequency:	50/60Hz

Accessories

	ETC Part #
Colour frame (19 cm sq./17 cm.inside diameter)	7061A3047
Safety cable (79 cm)	7061A1022
C-clamp	7060A2009
Top hat, 7.62 cm	PSF1022
Top hat, 15.24 cm	PSF1023
Half hat	PSF1027
Cross-baffle top hat	PSF1031
Egg-crate louver	PSF1028
Weighted base	PSF1032
Gel Extender 7.62 cm	PSF1030
Gel Extender 15.24 cm	PSF1029
Barn door	PSF1019

HID Lamp type and general information:

Do not use lamps other than the following types in the Source Four HID PAR CE. Use of lamps other than specified below will void CE safety compliance and your warranty.

Lamp Type	Manufacturing Codes	Watts	Base	Bulb	LCL	Ave. Hrs.	Initial lumens	Color temp
Ceramic Metal Halide	CDM-T 150W/830	150	G12	T6	56mm	9000	14000	3000°K
	CDM-T 150W/942	150	G12	T6	56mm	9000	12700	4000°K
	MD150T6/U/G12/830	150	G12	T6	56mm	9000	14000	3000°K
	MBI150/T/30	150	G12	T7	57mm	6000	11500	3000°K
	MBI150/T/40	150	G12	T7	57mm	6000	11250	4000°K

Installing the lamp

1. Disconnect power to the Source Four HID PAR CE before installing the lamp.
2. Loosen the knurled bolt on the back of the lamp housing and pull the housing out.
3. Holding it by the base, remove the lamp from its box.

Note: *To avoid premature lamp failure, do not touch the lamp glass with your fingers. If you touch the lamp during installation, clean it carefully with rubbing alcohol and a clean, lint-free cloth before operation.*

4. Insert lamp base into socket assembly. (***Figure 1***)
5. Push down on the lamp base until the lamp seats firmly.
6. Reinstall the lamp housing by aligning the bolt hole and tightening the knurled bolt.

CAUTION: *Replace the lamp if it becomes damaged or thermally deformed.*

Improperly installed lamps will cause premature lamp and socket failures.

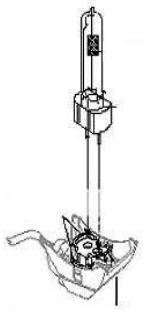


Figure 1

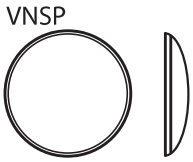
Ballast information

- The only acceptable voltage is 120V (+/- 10%) 50/60HZ.
- The standard operating current is 1.5 Amps.
- The standard inrush current is <14 Amps.
- Room ambient temperature should not exceed 40ºC.
- The lamp ignition voltage is 4.5Kv, non-hot restrike.
- The ballast case temperature should not exceed 75ºC.
- The ballast is attached to the Source Four yoke by two screws and is non-removable.

WARNING: *DO NOT power the Source Four HID PAR CE with a dimmable power supply. Dimming will damage the ballast and void the warranty.*

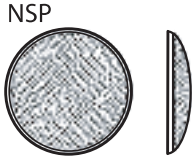
Lens identification

Lenses for the Source Four HID PAR CE come in four versions. The type or beam spread can be identified by the lens texture.



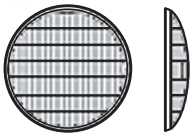
VNSP

Very narrow spot
Clear glass
15° Round beam shape



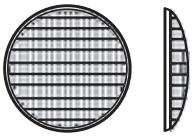
NSP

Narrow spot
Stipple glass (slight diffuse texture)
19° Round beam shape



MFL

Medium flood
Fewer facets, sized 6 x 22mm
21° x 34° Oblong beam shape



WFL

Wide flood
Many facets, sized 6 x 12mm
30° x 51° Oblong beam shape

Changing Source Four HID PAR CE lenses

Change lenses if they become cracked or badly scratched.

CAUTION: *Never operate the Source Four HID PAR CE without a lens in place.*

Source Four HID PAR CE lenses get hot while the unit is in operation. Let the fixture cool before handling the lens

Removing a lens

1. Disconnect power to the fixture before handling.
2. Place the fixture on a flat, stable work surface. **Do not** install or remove lenses with the unit hanging.
3. Position the lens rotation ring with the spring clip at the top of the unit, directly below the retaining clip.
4. Tilt the front of the fixture down at least 45 degrees.
5. Press the spring clip with your finger to release the lens (***Figure 2***).
6. Allow the lens to drop forward from under the clip.
7. When the lens drops, remove your finger, allowing the lens to slide forward until it rests on the lens catchers (***Figure 3***).
8. Carefully remove the lens from the fixture.

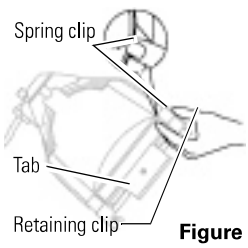


Figure 2

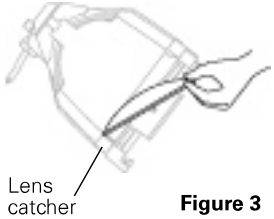


Figure 3

Installing a lens

1. Disconnect power to the fixture before handling.
2. Position the fixture with the front of the unit (the lens side) facing you, and tilted slightly (***Figure 2***).
3. Position the lens rotation ring with the spring clip at the top of the fixture, directly below the color frame retaining clip.
4. Hold the lens by the edge, and position it so the convex side faces the back of the fixture (***Figure 4***).
5. From the top of the fixture, slide the lens behind the lens catchers and position its base behind the tabs on the bottom of the lens rotation ring.
6. Gently push the top of the lens inward until it snaps behind the spring clip.

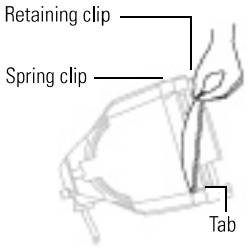


Figure 4

Colour frame retaining clip usage

The colour frame holder is equipped with a spring-loaded retaining clip that prevents colour frames and accessories from falling out. Make sure the Source Four HID PAR CE has the colour frame retaining clip in the locked position when hanging.

Note: *Make sure to use colourframes or accessories with a 17 cm inside diameter.*

1. Release the retaining clip by pushing it sideways. The retaining clip opens.
2. Insert the colour frame.
3. Press the retaining clip down until it locks.

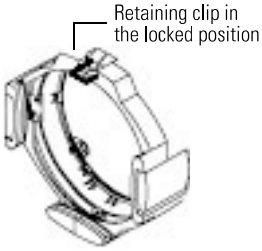


Figure 5

Cleaning the reflector

1. Unplug the fixture before attempting to clean the reflector.
2. Remove the lamp before attempting to clean the reflector.
3. Remove the lens so you can access the reflector from the front of the fixture. (See ***Removing a lens*** on page 6)
4. Remove dust with a blast of oil free air, or wipe with a clean, soft, lint-free cotton cloth. If this is sufficient to remove dust, go to step 7. Otherwise, continue to step 5.
5. Dampen a clean, soft, lint-free cotton cloth with a mild, soapy water solution and gently wipe the reflector.
6. Remove any soapy water residue with a clean, soft, lint-free cotton cloth dampened with water.
7. Reinstall a lens before using the fixture.

CAUTION: *Do not use glass or window cleaners on the reflector. Chemicals in the cleaners will harm the reflective coating. Do not use paper towels or harsh materials to wipe the reflector. These materials can scratch the surface of the reflector.*

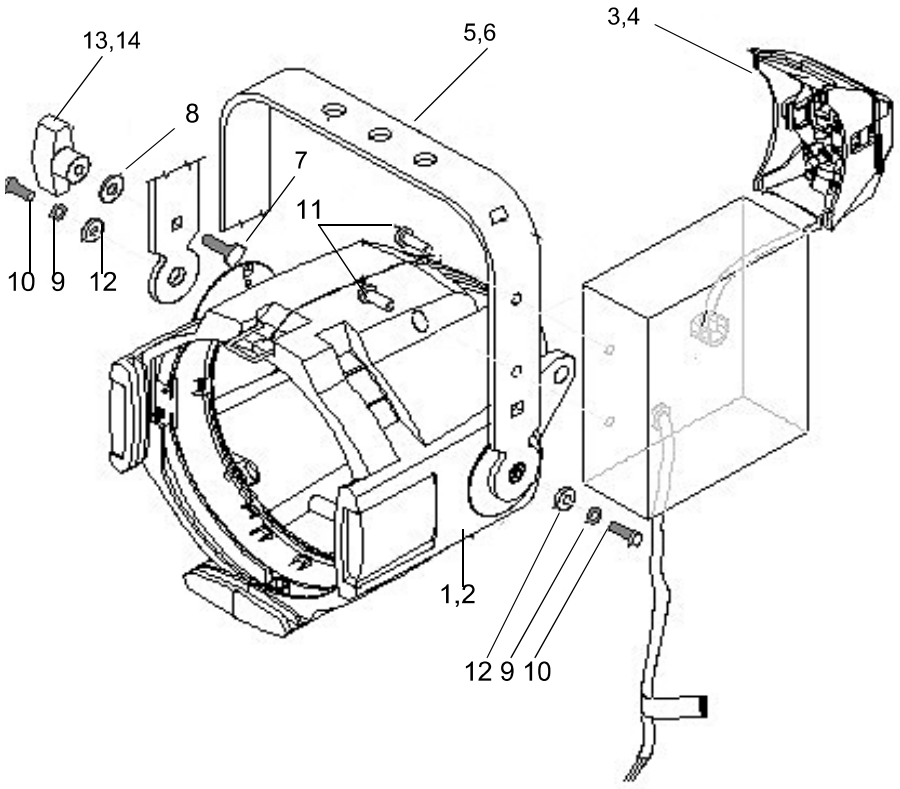
Housing assembly instructions

If you take apart the Source Four HID PAR CE for any reason, please use the following steps for reassembly. Improper reassembly will result in void of warranty and loss of performance.

Tools required: Phillips and flat head screwdrivers, rubber mallet, channel locks, pliers or crescent wrench.

1. Install the clutch plate (13) onto the left housing (3) and secure with nut (14). The right housing has three screw holes on its side, and one hole for the yoke bolt. The left housing only has two bolt holes, for the yoke.
2. Install the four reflector mount pads (4) in the right (2) and left (3) housing. There are two recessed places in each housing for the pads.
3. Insert the spring clip (10), with the open end facing the lamp, into the lens rotation ring (8). Place a flathead screwdriver in the spring clip slot and gently tap with a rubber mallet. Using your finger, press the clip down (as if to close it) until it snaps into place over the tab, inside the rotating ring.
4. Place the left housing on a flat surface with the lens end pointing to the right. Install the lens rotation ring (8) into the left housing (3).
5. Install the rotator pressure clip (12) into the left housing (3) with screw (9), and tighten firmly.
6. Place the spring (7) on the long end of the gel retainer clip (6) and insert the short end into the left housing (2).
7. Install the reflector (1) into the left housing (3). The reflector must be seated securely on the reflector mount pads, behind the ridge.
8. Position the reflector with the single orientation tab on the bottom, and fit it into the single slot on the base of the left housing. The edge of the reflector mount pads should be visible.
9. Pull the reflector tight against the edge of the housing. (Hint: This is easier if you hold the left housing with your left hand and put your left index finger through the hole on the back of the reflector.) Make sure the reflector is seated firmly (the orange pads should be visible).
10. Attach the right housing (2) to the left housing (3) using the three .6350 cm x 1.9cm screws (5). Make certain the gel retainer clip is in place.
11. Check for ease of movement of the gel retainer clip (6). The clip should latch into the left housing in the down position and not bind. If it is tight, work several times to loosen using channel locks, pliers or wrench.
12. Verify that the lens rotation ring rotates smoothly, but does not spin loosely.
13. Snap the focus knob plug (11) into the bottom of the fixture assembly, as shown in the Source Four HID PAR CE Housing Assembly diagram on page 6.

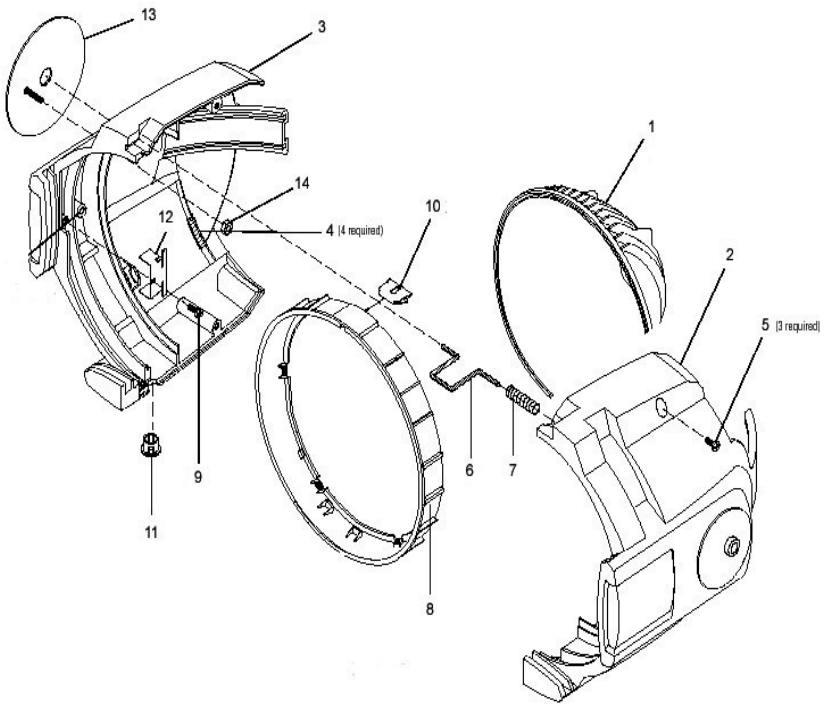
Spare parts list



Source Four HID PAR CE Final Assembly

Reference Number	Part Number	Description	Quantity Required
1	7061A2022	S4 HID PAR base assembly (black)	1
2	7061A2022-1	S4 HID PAR base assembly (white)	1
3	7061A2203-0X	CE HID PAR Lamp socket assembly (black)	1
4	7061A2203-1X	CE HID PAR Lamp socket assembly (white)	1
5	7061A3039	HID PAR yoke bracket (black)	1
6	7061A3039-1	HID PAR yoke bracket (white)	1
7	HW5125	Bolt, carriage	1
8	HW5126	Washer, flat	1
9	HW5139	Washer, split ring lock	2
10	HW5172	Bolt, hex	2
11	HW5270	Bolt, spinlock	2
12	HW522	Washer, flat	2
13	HW8144	Handle, yoke knob (black)	1
14	HW8144-1	Handle, yoke knob (white)	1

Spare parts list



Source Four HID PAR CE Housing Assembly

Reference Number	Part Number	Description	Quantity Required
1	7061A3014	Reflector, EA painted	1
2	7061A3025	Housing, right, PAR, painted	1
3	7061A3026	Housing, left, PAR, painted	1
4	7061A4001	Pad, silicon, reflector mount	4
5	HW391	Screw, .6350cmx1.9 cm PhPHMS, black zinc	3
6	7061A3005	Clip, gel retainer	1
7	HW750	Spring retainer	1
8	7060A4012	Lens rotation ring	1
9	HW3106	Screw, .6350 cmx.6350 PhFIMS, black zinc	1
10	7061A3013	Spring clip, rotator	1
11	HW6128	Plug, focus knob	1
12	7061A3029	Rotator pressure clip	1
13	7061A3031	Clutch plate, black anodized	1
14	HW402	Nut, .8 cm	1
not pictured	7061A1030	Source 4 Par safety screen	1

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